EXHIBIT B

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IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

TQ DELTA, LLC, **Plaintiff,** v.	§ § § § § §	**JURY TRIAL DEMANDED** ████████████████
COMMSCOPE HOLDING COMPANY, INC., COMMSCOPE INC., ARRIS INTERNATIONAL LIMITED, ARRIS GLOBAL LTD., ARRIS US HOLDINGS, INC., ARRIS SOLUTIONS, INC., ARRIS TECHNOLOGY, INC., and ARRIS ENTERPRISES, LLC,	§ § § § § § § § §	**Civil Action 2:21-cv-310-JRG** **(Lead Case)**
NOKIA CORP., NOKIA SOLUTIONS AND NETWORKS OY, and NOKIA OF AMERICA CORP. **Defendants.**	§ § § § § §	**Civil Action No. 2:21-cv-309-JRG** **(Member Case)**

OPENING EXPERT REPORT OF TODOR COOKLEV, PH.D.
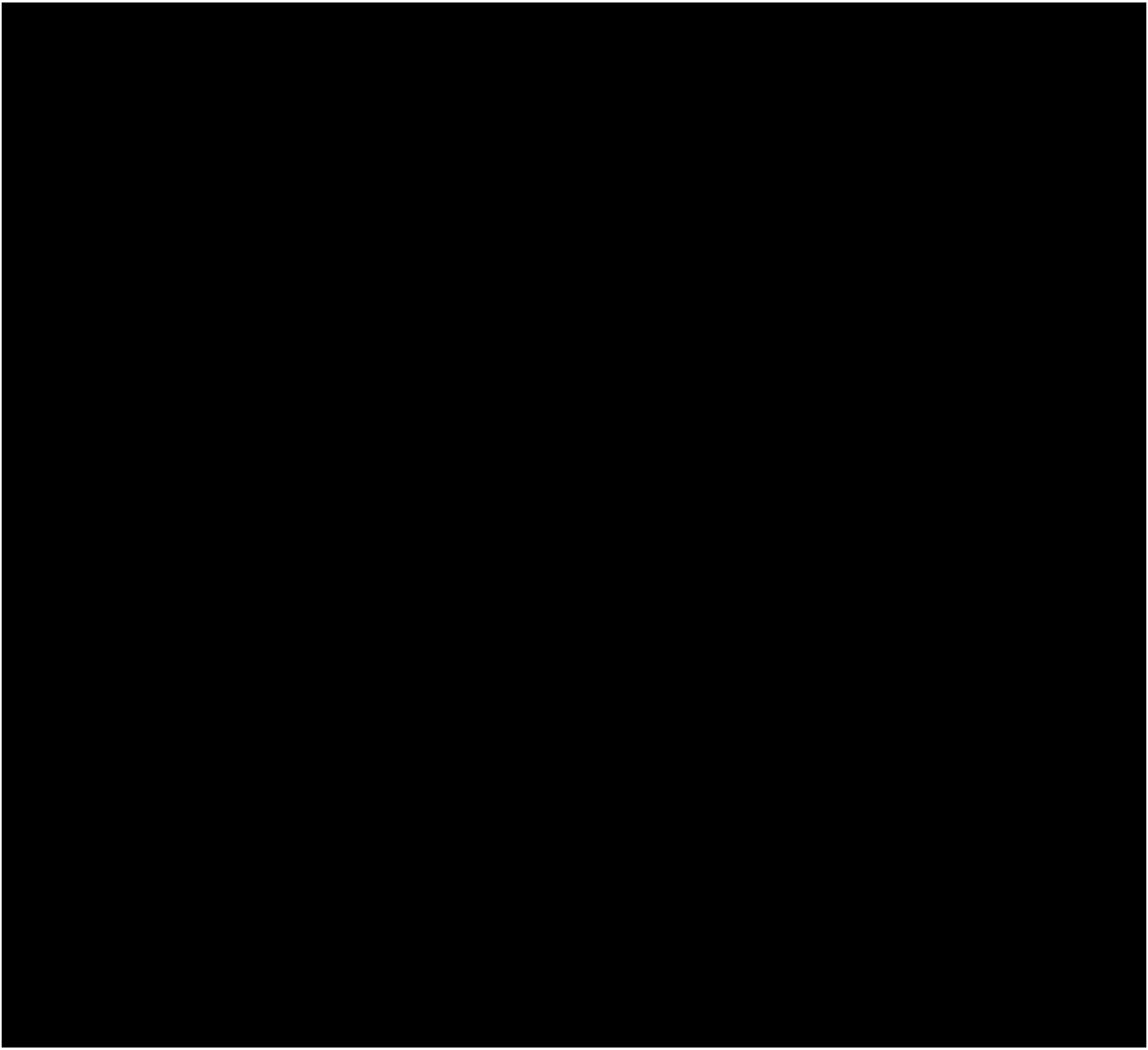
Dated: August 29, 2022

Todor Cooklev, PhD.

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Aerials, waveguides, resonators and other distributed constant components. Transmitters, transceivers, transponders. Communication receivers. Line transmission systems. Radio systems, including diversity, relay, mobile (including cellular). Optical and ultrasonic wave transmission systems. Spread Spectrum communication. Secret communication, jamming. TV systems, including stereoscopic, cable, subscription, satellite, interactive and high definition. Stereophonic broadcast systems.
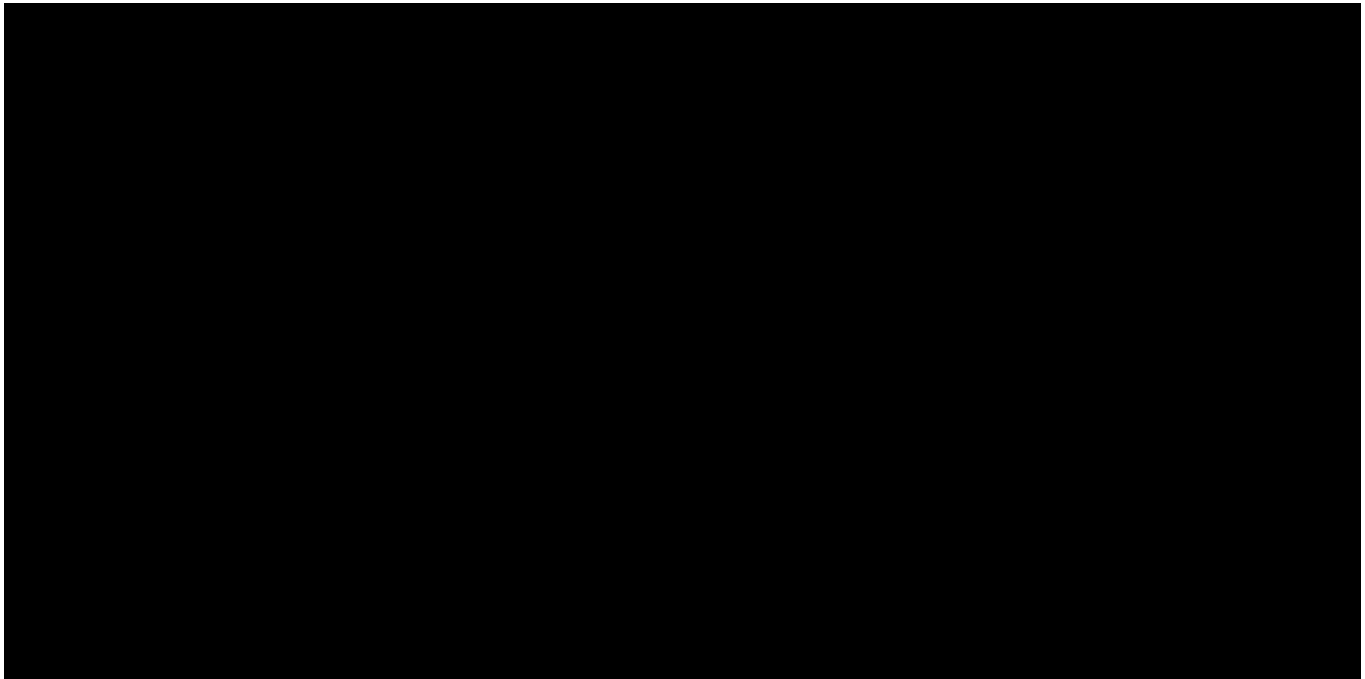
W03   TV and Broadcast Radio Receivers

AM/FM and DAB radio receivers, car radios. TV receivers including text aspects and MHEG, DVB, high definition, satellite, 3D/stereoscopic, stereophonic and surround sound. Remote control and interconnection.

2.   Legal Standards and Approach to Analysis

1343.   I understand that the ITU-T defines a standard-essential patent as a patent, the infringement of which is would be required in order to make equipment that complies with a standard.   "[E]ssential patents are patents that would be required to implement a specific Recommendation | Deliverable."[1573]

1344.   For purposes of this report, I have identified a patent as standard-essential if at least one of its claims is standard-essential. I also understand that a patent claim is essential even if the claim is required to be infringed by implementation of only an optional portion of the standard.

1345.   I understand that in a traditional patent infringement analysis, there are two steps: (1) construing the claims to determine their proper scope and meaning, and (2) then comparing the construed claims to accused device(s) or methods(s) (for my purposes, instead I compared the claims to the DSL standards) on a limitation-by-limitation basis.

[1573] Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC (26/06/2015).

24. A non-transitory computer-readable information storage media, having stored thereon instructions, that when executed by one or more processors, cause to be performed a method to operate a communications device comprising:

  supporting a plurality of modes of operation on a plurality of wireless links, wherein:

  during a first mode of operation, the communication device concurrently supports a first multicarrier access solution and a wireless communications solution, and

  during a second mode of operation, the communication device concurrently supports the first multicarrier access solution and a second, different, wireless communications solution, wherein the first and the second wireless communications solutions use the same FFT (Fast Fourier Transform) computational resources.

* * *

1361.   On the front page of each patent that I did not eliminate as a potential DSL standard essential patent, I hand-wrote the standards to which one or more independent claims were likely standard essential.

1363.   During my analysis, I determined that one or more independent claims of the following patents are likely essential to the practice of the following DSL standards:

U.S. Patent No. 5,400,322 – ADSL2, ADSL2+, VDSL2, G.inp, G.vector

U.S. Patent No. 5,519,731 – ADSL2+, VDSL2, G.inp, G.vector

U.S. Patent No. 6,236,726 – VDSL2, G.inp, G.vector

U.S. Patent No. 6,266,348 – ADSL2, ADSL2+

U.S. Patent No. 6,370,156 – ADSL2, ADSL2+, VDSL2, G.inp, G.vector

U.S. Patent No. 6,445,730 – ADSL2, ADSL2+

U.S. Patent No. 6,498,808 – ADSL2, ADSL2+, VDSL2, G.inp, G.vector

U.S. Patent No. 6,647,068 – ADSL2, ADSL2+, VDSL2, G.inp, G.vector

U.S. Patent No. 6,768,772 – G.hs